



## EC TYPE EXAMINATION (MODULE B) CERTIFICATE

No. 02-002631/024622

**THIS IS TO CERTIFY:**

That Croatian Register of Shipping did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with requirements of Marine Equipment Directive (MED) 2014/90/EU, subject to any conditions in the schedule attached hereto.

**TYPE AND DESCRIPTION OF PRODUCT**

Nozzles for fixed pressure water spraying fire extinguishing systems for ro-ro spaces and for special category spaces  
Type K 57

**NUMBER AND ITEM DESIGNATION** (in accordance with Annex of Regulation (EU) 2018/773)

MED/3.49a- Fixed water-based fire- fighting systems for ro- ro spaces, vehicle spaces and special category spaces - prescriptive based systems as per Circ.1430 Clause 4

**MANUFACTURER:**

PASTOR INŽENJERING d.d.  
10437 Rakitje, Novačka 2  
CROATIA

**REGULATIONS AND STANDARDS** (in accordance with Annex of Regulation (EU) 2018/773)

SOLAS 74 as amended, Regulation II-2/19, II-2/20, X/3  
IMO Res. MSC.98(73) - FSS Code, Chapter 7

**NOTICE:**

1. Further details of the product and conditions for certification are given overleaf.
2. This certificate will not be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with the notified body named on this certificate.
3. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply.
4. The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E, or F) of Annex II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.
5. In case limitations of use apply, these should be indicated of in the Schedule of Approval.

Issued by Croatian Register of Shipping, notified body number 2489.

This certificate is valid until: 2023-04-15

Place and date: Split, 2019-03-22

Seal

Signature

Marinko Popović, dipl.ing.

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION

Nozzles for fixed pressure water spraying fire extinguishing systems for ro-ro spaces and for special category spaces  
Type K 57

### 2. APPLICATION/LIMITATION OF USE

Approved for use in fixed water-based fire-fighting systems for ro-ro spaces and special category spaces.  
Installation shall be in accordance with requirements of IMO MSC.1/Circ.1430.

### 3. DESIGN DRAWINGS AND SPECIFICATIONS

Drawing No.:

SP 403.012, SP 422.012, SP 400.010, SP 400.011, SP 400.012, SP 013.001K, SP 013.003K

### 4. TYPE TEST RECORDS/LABORATORY RECOGNITION STATUS

Component testing: Test report No. 9/98 (FSB Zagreb) in accordance with IMO Resolution A.800(19). Test in compliance with IMO MSC.1/Circ.1430.

### 5. MATERIALS OR COMPONENTS REQUIRED TO BE TYPE APPROVED OR TYPE TESTED

Only nozzles are type approved by this certificate.

Nozzles are made of brass coated with Ni and Cr.

Nozzle type K 57: k- factor = 56,92 l/min bar<sup>0.5</sup> ; pressure = 6,4 bar ; flow = 144 l/min

Maximum operating pressure is 10 bar.

### 6. OTHER MATERIALS AND/OR COMPONENT

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### 7. PRODUCTION SURVEY REQUIREMENTS

The manufacturer is allowed to affix the Mark of Conformity to equipment referred and to issue a Declaration of Conformity as long as either of the following is fulfilled:

Module D: The quality system for production and testing shall be approved by the Notified Body, or

Module E: The quality system for inspection and testing shall be approved by the Notified Body, or

Module F: Compliance of the products in this EC Type-Examination Certificate is to be verified by the Notified Body, who shall also issue a Certificate of Conformity.

### 8. ONBOARD INSTALLATION AND MAINTENANCE REQUIREMENTS

As per requirements of regulations and standards stated on front page of the certificate and in accordance with Design, installation, operation and maintenance manual.

### 9. MARKING AND IDENTIFICATION



*Subject to compliance with the conditions in this Schedule of Approval which forms part of certificate, and those of Articles 9, 10 and 15 of the Directive, the Manufacturer is allowed to affix the "Mark of Conformity" to the Product described herein.*

2489/yy

*xxxx - the number of the Notified Body undertaking surveillance module (2489 in case of CRS)  
yy - the last two digits of year mark affixed*

### 10. OTHER

This approval is given with the understanding that the manufacturer will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of fitting and general maintenance of the approved equipment and of the conditions of this approval.

- END OF CERTIFICATE -